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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/801,584

03/17/2004

Georg Mayer

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2734

32294

7590

08/21/2009

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VIENNA, VA 22182-6212

EXAMINER

OVEISSI, DAVID M

ART UNIT

PAPER NUMBER

2416

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/801,584	<b>Applicant(s)</b> MAYER ET AL.	
	<b>Examiner</b> DAVID OVEISSI	<b>Art Unit</b> 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 5/11/2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 14-20, and 23-39 is/are pending in the application.
- 4a) Of the above claim(s) 11-13, 21 and 22 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-20, 23-29, and 31-36 is/are allowed.
- 6) ☒ Claim(s) 1-10 and 37-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

*Claims 11-13 and 21-22 have been cancelled.*

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-10, 14-20, and 23-39 have been considered but are moot in view of the new grounds) of rejection.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 7-10, and 30 are rejected under 35 U.S.C. 102 (e) as being unpatentable over (US 2003/0204728 A1) in view Siegel (US 2004/0203799 A1) further in view of **Applicant Admitted Prior Art (AAPA)** .

For claims 1, 10, and 30 **Irwin** with exception of (routing) teaches a method/apparatus of

extracting a routing information from a received message at a border between a first network and a second network (*see abstract and paragraph 10 "value extracted &*

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*certain node" and paragraph 33 "the destination node's own address or the destination address as extracted by the intermediary node from the packet."");*

adding at least one invalid routing entry to first-network routing entries of the routing information to blur or hide an actual number of routing entries which correspond to routing nodes through which the received message has been routed, the first-network entries relating to a routing path of the message within the first network (see *abstract and paragraph 10 "source node hides a cryptographically generated first special value based on the packet in header portion of the communication packet the cryptographically generated special value is the same as a invalid entry and communication packet is the same as received message finally the routing information is the same as header of the communication packet" and Fig. 1 "SOURCE NODE"*);

generating an encrypted routing information by encrypting the at least one invalid entry and the first-network entries by using an own token at least for each of the first-network entries (see *paragraph 7*);

replacing the routing information of the received message by the encrypted routing information (see *paragraph 10 and Fig. 1 an encrypted value replaces the extracted header (routing information) from the received communication packet (the received message) in the*); and

forwarding the received message with the encrypted routing information to the second network (see *paragraph 10 and Fig. 1 "the encrypted message is forwarded from network 12 to network 14 "cloud 18"*).

**Irwin** does not explicitly teach routing entry. However, **AAPA** teaches that (see paragraph 31 “header entry” paragraph 28 hiding entries with an invalid token “1987klwkmlmva98u4q5”, and paragraph 15 “network hiding, paragraphs 21- 27 “routing entries”).

**Irwin** does not explicitly teach routing information in the received packet although the header is well known in the art that contains information such as source address, destination address, and other routing information.

However, **Siegel** from the same field of endeavor teaches this limitation explicitly (see abstract the digitized voice packets contain one or more destination addresses in addition to other routing information. The routers (border apparatus) receive the voice packet and extract the routing information from the received packet.”).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of invention to use the teachings of **Siegel** in the steganographically (hiding the existence of information) packet traffic of **Irwin**.

This combination is possible because both teaching deal with the same problem of securing the communication channel through encryption. Encrypting the routing information can be also achieved through polymorphism and polyinstantiation.

The motivation for this combination is to enhance the security of routing paths.

For claim 2 **Irwin** teaches a method, further comprising providing the routing information in a routing header of the message (see *paragraph 10*).

For claim 7 **Irwin** teaches a method, further comprising  
marking the at least one added invalid routing entry (*see abstract special value and **AAPA** argument for claim 1*).

For claim 8 **Irwin** teaches and 20 a method, further comprising  
providing each of the first-network routing entries comprising at least one of  
name and address information of a network node through which the received message  
has been routed (*see **AAPA** argument for claim 1*).

For claim 9 **Irwin** teaches a method, further comprising  
providing the border between the first and second networks, wherein the border is  
defined at a gateway apparatus which the message traverses on a connection between  
the first and second networks (*see Fig.1 "12 and "14"*).

3. Claims 3 and 37-39 are rejected under 35 U.S.C. 103 (a) as being unpatentable  
over **Irwin** in view of **Siegel** further in view of **Yla-Outinen** et al. (US 2004/0152469 A1)

For claim 3 Neither **Irwin** nor **Siegel** teach a method, further comprising  
providing the routing header comprising a record-route header of a session  
initiation protocol message and a service-route header as specified for the session  
initiation protocol. However, **Yla-Outinen** from the same field of endeavor teaches this  
limitation (*see paragraphs 69, 79, and 80*). Thus it would have been obvious to the

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person of ordinary skill in the art at the time of invention to use the header of the **Yla-Outinen** in the authenticated packet traffic of **Irwin**. The motivation for this combination is the SIP is becoming a de-facto protocol.

For claims 37-39 Irwin does not teach an apparatus, wherein the network apparatus further comprises one of an interrogating call session control and a topology hiding gateway function. However, **Yla-Outinen** from the same field of endeavor teaches this limitation (*see paragraphs 7 and 9*). Thus it would have been obvious to the person of ordinary skill in the art at the time of invention to use (I-CSCF) **Yla-Outinen** in the authenticated packet traffic of **Irwin**. The motivation for this combination is the SIP is becoming a de-facto protocol.

4. Claims 4-6 are rejected under 35 U.S.C. 103 (a) as being unpatentable over **Irwin** in view of **Siegel** further in view of **Jensen et al. (US 6,185,612 B1)**.

For claim 4 Neither **Irwin** nor **Siegel** teach a method according, further comprising processing the routing information using a topology hiding method. However, **Jensen** from the same field of endeavor teaches this limitation (*see column 9 lines 59-67 and column 10 lines 1-7*). Thus it would have been obvious to the person of ordinary skill in the art at the time of invention to use topology hiding of Jensen in the authenticated packet traffic of **Irwin**. The motivation for this combination is to add another layer of security.

For claim 5 Neither **Irwin** nor **Siegel** teach a method, wherein, in the processing the topology hiding method is applied in response to a user identity marked with predetermined information. However, **Jensen** from the same field of endeavor teaches this limitation (*see column 9 lines 59-67 and column 10 lines 1-7*). Thus it would have been obvious to the person of ordinary skill in the art at the time of invention to use topology hiding of Jensen in the authenticated packet traffic of **Irwin**. The motivation for this combination is to add another layer of security.

For claim 6 **Irwin** Neither **Irwin** nor **Siegel** teach a method, wherein, in the processing, the topology hiding method is applied in response to a network identity. However, **Jensen** from the same field of endeavor teaches this limitation (*see column 9 lines 59-67 and column 10 lines 1-7*). Thus it would have been obvious to the person of ordinary skill in the art at the time of invention to use topology hiding of Jensen in the authenticated packet traffic of **Irwin**. The motivation for this combination is to add another layer of security.

***Allowable Subject Matter***

5. Claims 14-20, 23-29, and 31-39 are allowed.



***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure **Baehr et al. (5,878,231)** and **Schuster (US 6,857,072 B1)**.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **DAVID OVEISSI** whose telephone number is (571)270-3127. The examiner can normally be reached on Monday to Friday 8:00 AM to 5:00 PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ricky Ngo/  
Supervisory Patent Examiner, Art  
Unit 2416

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